QC ABSTRACT

NAME OF WORK: Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	KERB	Core Compressive strength	One Test		1	1
		Corrected Cylinder Compressive strength	One Test		1	1
		Equivalent Cube Compressive strength	One Test		1	1
7	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
8	Precast (250mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
9	RCC(M20)	Compressive Strength(7days and 28days)	11 set /350-400 cum	373.21	22	22

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID : **CP-2022-04-25-29** **Date: 17-09-21**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 14-09-21

Sample Type : Birla Super 53grade

Reference to BIS codes : IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification ,
IS 4031 (Part 1,2 3,4,5, 6,11):1988
IS 4031 Part 1 (RA 2021) DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4
IS 4031 Part 2, (RA 2018) Determination of Fineness by Blaine Air Permeability
IS 4031 Part 3, (RA 2019) Determination of Soundness, Clause 5, Clause 6
IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5
IS 4031 Part 5, (RA 2019) Determination of Initial & Final Setting Time, Clause 5
IS 4031 Part 11, (RA 2019)DETERMINATION OF DENSITY , Clause 6

Date of test : 15-09-21

Environmental Conditions during test : Temperature: 26°C
Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	3.1	–
2	Finess by Air permeablity method (m^2/kg,Min)	282.5	225m^2/kg, Min
3	Density (gm/cc)	3.14	–
4	Standard Consistency (%)	30.0%	Not specified
5	Initial Setting time	170 minutes	Not less than 30 minutes
6	Final Setting time	265 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	2.0 mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	CP-2022-04-25-29 **Date: 13-10-21**
Project Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
Agency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	14-09-21
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, (RA 2019) Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, (RA 2019) Determination of Compressive Strength, Clause 6
Date of test	:	15-09-21
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	3 Days	29.0N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.5N/mm^2	Not less than 37 N/mm^2
3	28 Days	56.5N/mm^2	Not less than 53 N/mm^2

* The results obtained are satisfactory as per standard requirements.

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Quality Manager

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2022-04-25-29** **Date: 17-09-21**
Project Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
Agency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	14-09-21
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	14-09-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	388	388	2.6	97.4	90-100
3	20 mm	6685	7073	47.2	52.8	30-70
4	10 mm	4895	11968	79.8	20.2	10-35
5	4.75 mm	2601	14569	97.1	2.9	0-5
6	Pan	431	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2022-04-25-29** **Date: 17-09-21**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	10.5	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	11.1	
3	Specific Gravity	2.63	–
4	Bulk Density(Loose) (Kg/l)	1.45	–
5	Bulk Density(Compacted) (Kg/l)	1.49	–
6	Water Absorption(%)	0.21	–

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2022-04-25-29** **Date: 16-09-21**
Project Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
Agency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	14-09-21
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	14-09-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	252	252	5.0	95.0	90-100
3	10 mm	2311	2563	51.3	48.7	25-55
4	4.75 mm	2075	4638	92.8	7.2	0-10
5	Pan	362	5000	100	0	–

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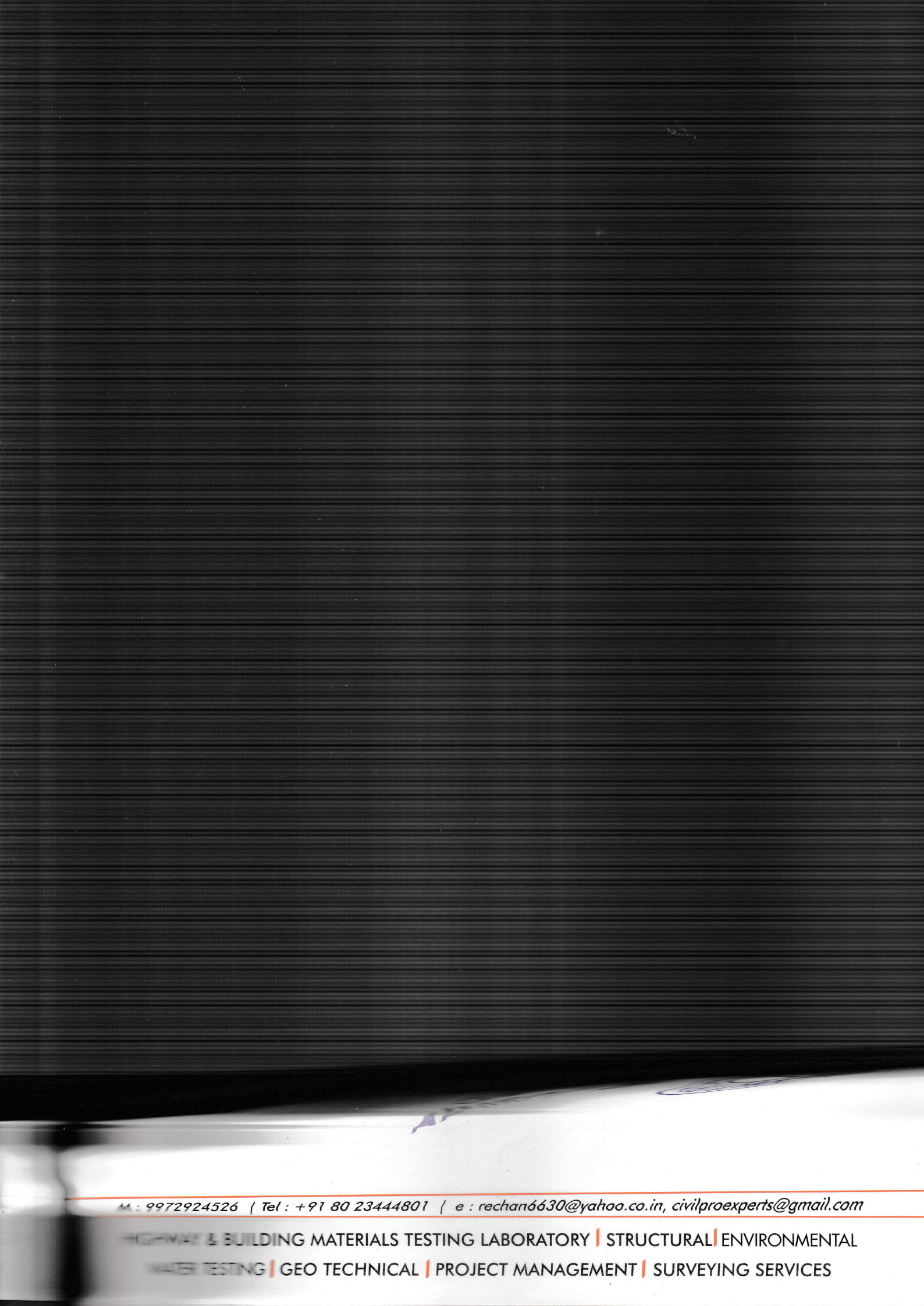

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT ON COARSE AGGREGATES

Lab ID	:	**CP-2022-04-25-29** **Date: 16-09-21**
Project Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
Agency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	14-09-21
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2021 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	14-09-21

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	252	252	5.0	95.0	90-100
3	10 mm	2311	2563	51.3	48.7	25-55
4	4.75 mm	2075	4638	92.8	7.2	0-10
5	Pan	362	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : CP-2022-04-25-29 Date: 16-09-21

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.8	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	13.1	
3	Specific Gravity	2.62	–
4	Bulk Density(Loose) (Kg/l)	1.52	–
5	Bulk Density(Compacted) (Kg/l)	1.57	–
6	Water Absorption(%)	0.18	–
7	Aggregate crushing Value(%)	24.2	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.1	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signature
Quality Manager

End of Report

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF FINE AGGREGATE

Lab ID : **CP-2022-04-25-29** **Date: 16-09-21**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 14-09-21

Sample Type : Fine Aggregate

Reference to BIS codes : IS 383 : 2016 (Specification for Coarse and fine Aggregates)
IS: 2386 :1963(Part - 1, 3) RA2012
IS 2386 Part 1: Particle Size and Shape
IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption

Date of test : 14-09-21

Total weight taken : 1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	32	32	3.2	96.8	90-100	90-100	90-100	95-100
3	2.36 mm	48	80	8.0	92.0	60-95	75-100	85-100	95-100
4	1.18 mm	232	312	31.2	68.8	30-70	55-90	75-100	90-100
5	600 micron	185	497	49.7	50.3	15-34	35-59	60-79	80-100
6	300 micron	288	785	78.5	21.5	5-20	8-30	12-40	15-50
7	150 micron	154	939	93.9	6.1	0-10	0-10	0-10	0-15
8	Pan	61	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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TEST REPORT OF FINE AGGREGATE

Lab ID : CP-2022-04-25-29 Date: 16-09-21

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS 383:2016
1	Water Absorption(%)	1.23	–
2	Specific Gravity	2.56	–
3	Material finer than 75 micron(%)	6.8	Uncrushed fine Aggregate Max 3%, Crushed Fine aggregate Max 15%, Mixed Fine aggregate Max 12%, Manufactured Fine aggregate Max 10%

* The results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST RESULTS OF STEEL

Lab ID : CP-2022-04-25-29

Date: 16-09-21

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 14-09-21

Sample Type : Sunvik

Reference to BIS codes : IS 1786-2008, IS:1608-2005(RA 2011), IS 1599-2019.

Date of test: : 15-09-21

Sl.No	Identification of sample	Grade of the sample	Diameter of the steel bar	Weight of the sample	Yield stress	Tensile strength	Elongation	Bend test	Rebend test
			(mm)	(kg/m)	(N/mm2)	(N/mm2)	(%)		
2	Sunvik	Fe500	10	0.614	543	653	21.0%	Satisfactory	Satisfactory
3	Sunvik	Fe500	12	0.885	565	682	20.0%	Satisfactory	Satisfactory

The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF PRECAST COVER SLAB

: CP-2022-04-25-29 **Date: 01-10-21**

Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

: Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

's Reference : BBMP/EE/BTP/WO/146/2019-20

Receipt : 27-09-21

Type /Size : Precast Cover Slab 100mm Thick

to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete

test : 27/09/2021

Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
	(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
Cover Slab-1	75.02	100.51	1.385	4419	85.3	19.3	18.0	22.4
Cover Slab-2	75.01	100.49	1.366	4418	80.8	18.3	17.0	21.3
Cover Slab-3	75.03	100.52	1.378	4421	83.2	18.8	17.5	21.9

results obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF PRECAST COVER SLAB

ID	:	CP-2022-04-25-29
Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
er's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Receipt	:	27-09-21
Type /Size	:	Precast Cover Slab 250mm Thick
to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete
test	:	27/09/2021

Date: 01-10-21

Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
	(mm)	(mm)	(kg)	(Sq.mm)	(KN)	(N/mm^2)	(N/mm^2)	(N/mm^2)
Cover Slab-1	200.02	250.51	3.862	31416	492.1	15.7	14.6	18.2
Cover Slab-2	200.04	250.52	3.855	31423	502.7	16.0	14.9	18.6
Cover Slab-3	200.01	250.49	3.873	31413	510.0	16.2	15.1	18.9

esults obtained are satisfactory as per standard requirements.

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

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M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF CEMENT CONCRETE KERB STONE

: **CP-2022-04-25-29** **Date: 01-10-21**

Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

: Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

's Reference : BBMP/EE/BTP/WO/146/2019-20

Receipt : 27-09-21

Type /Size : CC Kerb Stone/ 450*165*400mm

to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete

f test : 27/09/2021

Identification Mark	Diameter of the core	Height of the core	Weight of the core	Area	Failure Load	Core Compressive strength	Corrected Cylinder Compressive strength	Equivalent Cube Compressive strength
	(mm)	(mm)	Kg	(Sq.mm)	(KN)	(N/mm2)	(N/mm2)	(N/mm2)
A	100.02	165.51	2.885	7856	145.2	18.5	18.5	23.1
B	100.03	165.49	2.899	7857	149.6	19.0	19.0	23.8
C	100.01	165.52	2.915	7854	154.8	19.7	19.7	24.6

esults obtained are satisfactory as per standard requirements.

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 16/10/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 11-10-21

Customer ID : Drain Bottom Raft- SMR Apartment Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 16/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	151.09 X 151.17 X 151.73	22841	8.126	433.2	19.0	18.8
2	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	150.67 X 149.13 X 150.70	22470	8.833	416.3	18.5	
3	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	151.48 X 149.57 X 150.99	22657	8.561	429.4	19.0	

The results obtained are satisfactory as per standard requirements.

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Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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AN ISO 9001 : 2008 COMPANY & ACCREDITED LABORATORY AS PER ISO/IEC 17025:2017
4, 7TH MAIN MALLESWARAM, BANGALORE -3
Certificate No.: TC-5548

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 06/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 11-10-21

Customer ID : Drain Bottom Raft- SMR Apartment Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	149.42 X 149.66 X 149.31	22363	8.417	519.4	23.2	23.1
2	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	151.18 X 150.50 X 149.79	22752	9.094	532.9	23.4	
3	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	151.25 X 149.27 X 150.70	22577	8.906	512.8	22.7	

Results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date. BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

: CP-2022-04-25-29 **Date: 16/10/2021**

: Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

: Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Reference : BBMP/EE/BTP/WO/146/2019-20

Receipt : 11-10-21

ID : Drain Bottom Raft- SMR Apartment Main Road

Type /Size : 150X150X150 mm

grade/Age : M20 / 7 Days Compressive Strength

to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

test : 16/10/2021

Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm²)	Average Compressive Strength (N/mm²)
Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	150.16 X 149.62 X 151.38	22468	8.969	424.2	18.9	18.5
Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	149.57 X 150.47 X 151.98	22505	8.234	410.4	18.2	
Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	16/10/2021	150.06 X 151.18 X 151.74	22687	8.107	415.7	18.3	

esults obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date BANGALORE

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Quality Manager

****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 06/11/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 11-10-21

Customer ID : Drain Bottom Raft- SMR Apartment Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	150.84 X 151.57 X 151.67	22863	8.428	526.1	23.0	22.8
2	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	149.73 X 150.81 X 149.79	22581	8.137	508.5	22.5	
3	Drain Bottom Raft-SMR Apartment Main Road	M20	09/10/2021	06/11/2021	151.25 X 151.28 X 149.20	22880	8.683	524.8	22.9	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 19/10/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 16-10-21

Customer ID : Drain Bottom Raft- Rajeshwari Badavane Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 19/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	151.81 X 151.13 X 149.98	22942	8.541	426.7	18.6	18.5
2	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	150.36 X 149.52 X 151.46	22483	8.318	424.4	18.9	
3	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	151.92 X 150.75 X 150.55	22902	8.510	414.7	18.1	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date BANGALORE

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Quality Manager

****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID	:	**CP-2022-04-25-29** **Date: 09/11/2021**
Project Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
Agency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	16-10-21
Customer ID	:	Drain Bottom Raft- Rajeshwari Badavane Main Road
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	09/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	150.42 X 150.22 X 149.08	22596	8.332	531.5	23.5	23.0
2	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	151.76 X 149.36 X 150.63	22667	8.909	514.8	22.7	
3	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	149.98 X 151.14 X 149.61	22668	8.510	513.2	22.6	

Results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 19/10/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 16-10-21

Customer ID : Drain Bottom Raft- Rajeshwari Badavane Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 19/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	149.95 X 151.60 X 150.65	22732	8.474	431.1	19.0	18.4
2	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	149.30 X 150.31 X 149.69	22442	8.703	405.6	18.1	
3	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	19/10/2021	151.76 X 151.40 X 150.19	22976	8.861	414.9	18.1	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig Date BANGALORE

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 09/11/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 16-10-21

Customer ID : Drain Bottom Raft- Rajeshwari Badavane Main Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 09/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	149.02 X 150.22 X 149.91	22387	8.984	536.3	24.0	23.4
2	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	149.46 X 151.42 X 150.41	22632	8.220	530.3	23.4	
3	Drain Bottom Raft-Rajeshwari Badavane Main Road	M20	12/10/2021	09/11/2021	151.68 X 149.73 X 151.09	22711	8.258	515.0	22.7	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig Date BANGALORE

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

: ***CP-2022-04-25-29*** **Date: 23/10/2021**

Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

: Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 18-10-21

Customer ID : Drain Side Wall- Slamp Board Back Side

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	150.11 X 151.05 X 150.40	22674	8.636	418.9	18.5	18.5
2	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	151.90 X 149.38 X 150.51	22690	8.164	409.1	18.0	
3	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	149.76 X 149.05 X 151.21	22322	8.229	423.6	19.0	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date. BANGALORE

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 13/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 18-10-21

Customer ID : Drain Side Wall- Slamp Board Back Side

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of Test : 13/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	151.80 X 149.26 X 151.65	22658	8.947	526.5	23.2	22.8
2	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	150.90 X 149.14 X 150.22	22506	8.484	517.6	23.0	
3	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	149.25 X 150.21 X 150.78	22419	8.571	495.7	22.1	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig Date BANGALORE

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Quality Manager

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 23/10/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Client : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 18-10-21

Customer ID : Drain Side Wall- Slamp Board Back Side

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	149.36 X 149.32 X 151.54	22302	8.211	407.4	18.3	18.4
2	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	150.37 X 151.38 X 151.56	22764	8.194	430.5	18.9	
3	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	23/10/2021	150.23 X 150.66 X 151.73	22634	8.378	410.0	18.1	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig. Date BANGALORE

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R KARTHIK RECHAN
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Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 13/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 18-10-21

Customer ID : Drain Side Wall- Slamp Board Back Side

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 13/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	149.02 X 149.89 X 151.38	22336	9.087	514.8	23.0	22.9
2	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	149.40 X 151.22 X 150.52	22592	8.226	523.0	23.2	
3	Drain Side Wall-Slamp Board Back Side	M20	16/10/2021	13/11/2021	151.82 X 150.67 X 151.56	22874	8.848	515.6	22.5	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig. Date. BANGALORE

FOR CIVIL Pro.

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Quality Manager

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

	:	**CP-2022-04-25-29** **Date: 27/10/2021**
Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	22-10-21
Customer ID	:	Drain Side Wall- Prakruthi Layout dead end Road
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 7 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	27/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	150.16 X 150.01 X 149.28	22526	8.541	421.3	18.7	18.7
2	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	149.73 X 151.94 X 150.13	22749	9.028	421.1	18.5	
3	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	149.57 X 149.96 X 149.14	22430	8.954	421.8	18.8	

The results obtained are satisfactory as per standard requirements.

AEE (WRD) SD

FOR CIVIL Pro.

CIVIL Pro Sig. Date. BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 17/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 22-10-21

Customer ID : Drain Side Wall- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 17/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	149.28 X 149.39 X 150.42	22301	8.526	530.8	23.8	23.0
2	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	151.78 X 151.68 X 150.55	23022	8.662	524.4	22.8	
3	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	150.30 X 151.06 X 151.93	22705	9.054	507.1	22.3	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig Date BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 27/10/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 22-10-21

Customer ID : Drain Side Wall- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 27/10/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	150.26 X 149.00 X 151.31	22389	8.497	408.5	18.2	18.6
2	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	150.78 X 151.75 X 151.67	22881	8.229	426.6	18.6	
3	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	27/10/2021	149.18 X 151.22 X 149.83	22558	8.874	427.6	19.0	

The results obtained are satisfactory as per standard requirements.

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

CIVIL PRO BANGALORE Sig. Date

AEE (VRP) SD

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 17/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 22-10-21

Customer ID : Drain Side Wall- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 17/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	150.39 X 150.65 X 149.44	22656	9.097	537.0	23.7	23.0
2	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	150.69 X 151.04 X 151.44	22761	8.875	514.9	22.6	
3	Drain Side Wall-Prakruthi Layout dead end Road	M20	20/10/2021	17/11/2021	150.86 X 151.00 X 151.34	22781	8.932	517.3	22.7	

*The results obtained are satisfactory as per standard requirements.

AEE (WRP) SD

CIVIL Pro Sig. Date. BANGALORE

FOR CIVIL Pro.

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY / STRUCTURAL / ENVIRONMENTAL
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 02/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 28-10-21

Customer ID : Culvert Bottom Raft- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 02/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	02/11/2021	150.68 X 151.37 X 150.55	22808	8.396	413.4	18.1	18.1
2	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	02/11/2021	150.54 X 150.88 X 151.49	22713	8.829	413.6	18.2	
3	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	02/11/2021	151.05 X 150.11 X 151.77	22674	8.386	409.0	18.0	

* The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

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CIVIL PRO Sig. Date. BANGALORE

R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29** **Date: 23/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 28-10-21

Customer ID : Culvert Bottom Raft- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 23/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	23/11/2021	150.35 X 149.48 X 149.51	22475	8.692	534.7	23.8	23.2
2	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	23/11/2021	151.91 X 150.09 X 150.83	22801	9.069	522.9	22.9	
3	Culvert Bottom Raft-Prakruthi Layout dead end Road	M20	26/10/2021	23/11/2021	150.91 X 151.10 X 151.91	22804	8.853	520.8	22.8	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SB

CIVIL Pro Sig Date BANGALORE

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

: CP-2022-04-25-29 **Date: 06/11/2021**

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 02-11-21

Customer ID : Culvert Side Wall- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 7 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 06/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	151.78 X 149.70 X 150.35	22721	8.233	420.0	18.5	18.4
2	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	149.56 X 151.06 X 151.23	22591	8.401	411.3	18.2	
3	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	151.96 X 149.16 X 150.30	22666	8.573	422.4	18.6	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) Sec

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R KARTHIK RECHAN
Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

HIGHWAY & BUILDING MATERIALS TESTING LABORATORY | STRUCTURAL | ENVIRONMENTAL
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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

	:	***CP-2022-04-25-29*** **Date: 27/11/2021**
Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
gency	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
Customer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
Date of Receipt	:	02-11-21
Customer ID	:	Culvert Side Wall- Prakruthi Layout dead end Road
Sample Type /Size	:	150X150X150 mm
Sample grade/Age	:	M20 / 28 Days Compressive Strength
Reference to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
Date of test	:	27/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	151.88 X 150.38 X 150.79	22840	8.527	536.9	23.5	23.1
2	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	149.53 X 150.72 X 150.47	22537	8.616	526.4	23.4	
3	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	151.81 X 151.21 X 150.22	22954	8.247	514.5	22.4	

* The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

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R KARTHIK RECHAN
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****End of Report****

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Format No: CP/TF/01

TEST REPORT OF CEMENT CONCRETE CUBES

ID	:	**CP-2022-04-25-29** **Date: 06/11/2021**
Name	:	Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.
	:	Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.
mer's Reference	:	BBMP/EE/BTP/WO/146/2019-20
f Receipt	:	02-11-21
mer ID	:	Culvert Side Wall- Prakruthi Layout dead end Road
e Type /Size	:	150X150X150 mm
e grade/Age	:	M20 / 7 Days Compressive Strength
ence to BIS codes	:	IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5
f test	:	06/11/2021

Sl. No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	149.40 X 149.80 X 149.81	22381	8.901	418.1	18.7	18.6
2	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	150.36 X 151.93 X 151.11	22845	8.373	424.6	18.6	
3	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	06/11/2021	150.59 X 150.25 X 149.25	22626	8.763	421.5	18.6	

The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

FOR CIVIL Pro.

CIVIL PRO BANGALORE Sig. Date.

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Authorized Signatory
Quality Manager

****End of Report****

M : 9972924526 | Tel : +91 80 23444801 | e : rechan6630@yahoo.co.in, civilproexperts@gmail.com

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TEST REPORT OF CEMENT CONCRETE CUBES

Lab ID : **CP-2022-04-25-29**

Date: 27/11/2021

Project Name : Improvements to Roads and Drains at Varadarajanagar and surrounding area in Ward No.11 Kuvempunagara.

Agency : Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th Cross road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagara, Bangalore-560 010.

Customer's Reference : BBMP/EE/BTP/WO/146/2019-20

Date of Receipt : 02-11-21

Customer ID : Culvert Side Wall- Prakruthi Layout dead end Road

Sample Type /Size : 150X150X150 mm

Sample grade/Age : M20 / 28 Days Compressive Strength

Reference to BIS codes : IS: 516 - 1959 (RA 2018) Methods of Tests for Strength of Concrete Cl.5

Date of test : 27/11/2021

SL No.	Identification Mark	Grade of concrete	Date of Casting	Date of Testing	Dimension of the Specimen (mm)	Cross sectional area (Sq.mm)	Weight of the sample (kg)	Failure Load (KN)	Compressive strength (N/mm^2)	Average Compressive Strength (N/mm^2)
1	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	149.38 X 150.12 X 149.78	22424	8.476	536.6	23.9	23.2
2	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	151.40 X 151.23 X 150.52	22896	8.666	534.3	23.3	
3	Culvert Side Wall-Prakruthi Layout dead end Road	M20	30/10/2021	27/11/2021	149.61 X 149.70 X 150.07	22397	8.975	501.8	22.4	

* The results obtained are satisfactory as per standard requirements.

AEE (VRP) SD

CIVIL Pro Sig Date BANGALORE

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